

What is claimed is:

Claims

- 5 1. A multiple-protocol home location register comprising:
- a receiver for receiving, from a requesting network of at least two requesting networks, a network request according to one of at least two network protocols;
- 10 a processor, within the multiple-protocol home location register, for processing the network request utilizing a common source of data and common control procedures for the at least two network protocols to obtain information requested by the network request;
- 15 a transmitter, operably coupled to the processor, for relaying the requested information to the requesting network.
- 20 2. The multiple-protocol home location register of claim 1, wherein the processor comprises one or more protocol gateways, operably coupled to a database that provides the common source of data, wherein the one or more protocol gateways are arranged and constructed to interpret network requests and generate, utilizing the common control procedures for the at least two network protocols, one or more queries to the database.
- 25 3. The multiple-protocol home location register of claim 1, wherein the processor comprises one or more application gateways, operably coupled to a database that provides the common source of data, wherein the one or more application gateways are arranged and constructed to interpret messages and generate,
- 30 utilizing the common control procedures, one or more queries to the database.

4. A method comprising the steps of:

receiving, by a multiple-protocol home location register, a network request from a requesting network of at least two requesting networks, wherein the network request is composed according to one of at least two network protocols;

processing the network requests using a common source of data and common control procedures for the two or more protocols to obtain information requested by the network request;

relaying the requested information to the requesting network.

5. The method of claim 4, wherein the step of processing comprises the steps of:

interpreting the network request according to rules associated with one of the at least two network protocols;

generating at least one query related to the network request and relaying the at least one query to a subscriber database;

receiving the requested information from the subscriber database.

6. The method of claim 5, wherein the step of processing further comprises the step of generating a common command related to the network request, wherein the common command is utilized to generated the at least one query.

7. The method of claim 4, wherein the step of processing further comprises the step of providing an interworking function between the two or more protocols.

8. A method comprising the steps of:

receiving, by a first protocol gateway, a first message from a first network
utilizing a first network protocol;

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interpreting the first message according to rules associated with the first
network protocol;

generating a command based on the interpretation of the first message;

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generating at least one query based on the command and relaying the at least
one query to a subscriber database;

receiving at least one response to the at least one query related to the first
message;

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relaying the at least one response to the first network.

9. The method of claim 8, further comprising the steps of:

receiving, by the protocol gateway, a second message from a second network
utilizing a second network protocol;

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interpreting the second message according to rules associated with the second
network protocol;

generating a second command based on the interpretation of the first message;

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generating at least one query related to the second command and relaying the
at least one query related to the message to the subscriber database;

receiving at least one response to the at least one query related to the second
message;

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relaying, to the second network, the at least one response to the at least one
query related to the second message.

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10. The method of claim 9, wherein the steps of interpreting and generating are
common to the first protocol gateway and the second protocol gateway.

11. The method of claim 8, wherein the step of receiving the message

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terminates the network protocol.

12. The method of claim 8, wherein the rules associated with the network
protocol comprise at least one communication standard.

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13. The method of claim 8, wherein the plurality of network protocols comprises
at least two of ANSI-41, GSM MAP, SIP, H.323, AAA, and M-IP.

14. The method of claim 8, wherein the network protocols transport at least one of voice, data, and multimedia via at least one of wireline and wireless communication media.

5 15. The method of claim 8, wherein the database comprises data for a plurality of communication devices and data utilized by at least two networks.

16. The method of claim 15, wherein the data comprises user profile information.

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17. The method of claim 8, further comprising the steps of generating at least one query related to a message from an application server and upon receiving a response to the at least one query, relaying the response to the application server.

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18. The method of claim 8, further comprising the step of providing an interworking function between the first network protocol and a second network protocol.

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19. The method of claim 8, wherein the command is one of a set of commands utilized by a database manager, the first protocol gateway, and a second protocol gateway.

20. A system comprising:

a database comprising data for a plurality of communication devices, wherein the data complies with at least two network protocols;

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one or more protocol gateways, operably coupled to the database, arranged and constructed to interpret network requests from the at least two network protocols and generate one or more queries to the database.

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21. The system of claim 20, wherein each of the one or more protocol gateways are arranged and constructed to receive and process network requests for home location register data.

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22. The system of claim 20, wherein each protocol gateway is associated with a different network protocol.

23. The system of claim 20, wherein each protocol gateway terminates a network protocol associated with the protocol gateway.

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24. The system of claim 20, wherein each protocol gateway is arranged and constructed to interpret network requests according to rules associated with a network protocol related to the protocol gateway.

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25. The system of claim 20, wherein the one or more network protocols comprise at least one of ANSI-41, GSM MAP, SIP, H.323, AAA, and M-IP.

26. The system of claim 20, wherein the network requests relate to at least one of voice, data, and multimedia communications via at least one of wireline and wireless communication media.

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27. The system of claim 20, wherein the data comprises user profile information.

28. The system of claim 20, wherein the data comprises authentication information.

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29. The system of claim 20, wherein the data comprises location information.

30. The system of claim 20, further comprising an application server, operably coupled to the database and arranged and constructed to interpret an

10 application request from an application server and generate one or more queries to the database.

31. The system of claim 20, wherein the database is arranged and constructed to provide an interworking function between the one or more protocol gateways.

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32. The system of claim 20, wherein the database comprises a database manager and a data storage component.

33. The system of claim 20, wherein the database comprises a plurality of core servers that utilize procedures and commands common to the one or more protocol gateways.

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receiving a message from a first network via a first protocol gateway;

- generating at least one database query based on the processed message;

- 10 relaying the at least one database query to a database comprising data common to a first network associated with the first protocol gateway and a second network associated with the second protocol gateway.

35. The method of claim 34, further comprising the steps of receiving a response to the at least one database query and generating a request to the second protocol gateway.

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36. The method of claim 35, wherein the response identifies the second protocol gateway.

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37. The method of claim 35, wherein the response identifies a location for a communication device.

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38. The method of claim 35, further comprising the steps of:

receiving a reply to the request to the second protocol gateway;

generating a message based on the reply;

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relaying the message to the first protocol gateway.

39. The method of claim 38, wherein the reply includes routing information.

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40. The method of claim 39, further comprising the step of utilizing the routing information to route a call to a communication device located in a coverage area of the second network.